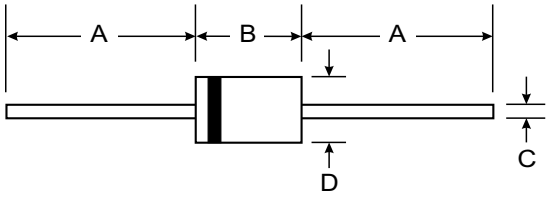
SF4001-SF4007

1A Axial Leaded Super Fast Soft Recovery Rectifier

Features

- Glass passivated
- Hermetically sealed axial leaded glass envelope
- Low reverse current
- High reverse voltage



Mechanical Data

- Switched mode power supplies
- High–frequency inverter circuits

DO-41		
Dim	**Min**	**Max**
A	25.40	—
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics

@ T_A = 25°C unless otherwise specified

Parameter	Test Conditions	Type	Symbol	Value	Unit
Reverse voltage =Repetitive peak reverse voltage		SF4001	$V_R=V_{RRM}$	50	V
		SF4002	$V_R=V_{RRM}$	100	V
		SF4003	$V_R=V_{RRM}$	200	V
		SF4004	$V_R=V_{RRM}$	400	V
		SF4005	$V_R=V_{RRM}$	600	V
		SF4006	$V_R=V_{RRM}$	800	V
		SF4007	$V_R=V_{RRM}$	1000	V
Peak forward surge current	t_p=10 ms, half sinewave		I_{FSM}	30	A
Average forward current	Lead length l = 10 mm		I_{FAV}	1	A
Junction and storage temperature range			$T_j=T_{stg}$	–55...+175	˚C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F =1A	SF4001–SF4004	V_F			1	V
		SF4005–SF4007	V_F			1.7	V
Reverse current	$V_R=V_{RRM}$		I_R			5	μA
	$V_R=V_{RRM}$, T_j=125˚C		I_R			50	μA
Reverse breakdown voltage	I_R=100μA	SF4001	$V_{(BR)R}$	50			V
		SF4002	$V_{(BR)R}$	100			V
		SF4003	$V_{(BR)R}$	200			V
		SF4004	$V_{(BR)R}$	400			V
		SF4005	$V_{(BR)R}$	600			V
		SF4006	$V_{(BR)R}$	800			V
		SF4007	$V_{(BR)R}$	1000			V
Reverse recovery time	I_F=0.5A, I_R=1A, i_R=0.25A	SF4001–SF4004	t_{rr}			50	ns
		SF4005–SF4007	t_{rr}			75	ns

Characteristics (T_j = 25°C unless otherwise specified)

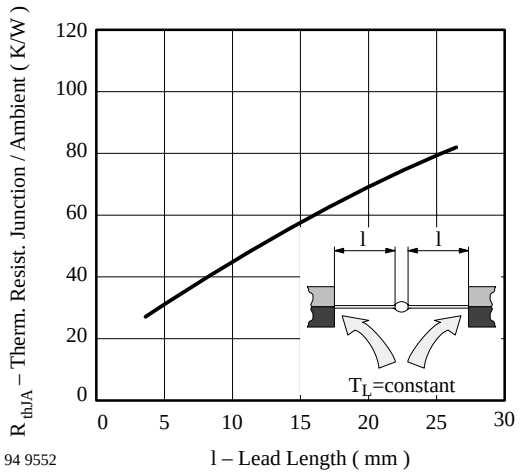


Figure 1. Max. Thermal Resistance vs. Lead Length

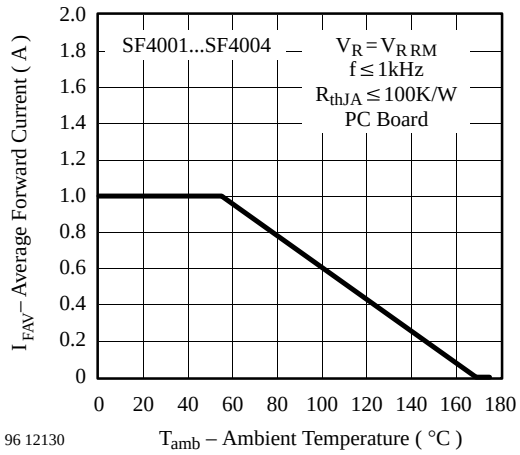


Figure 2. Max. Average Forward Current vs. Ambient Temperature

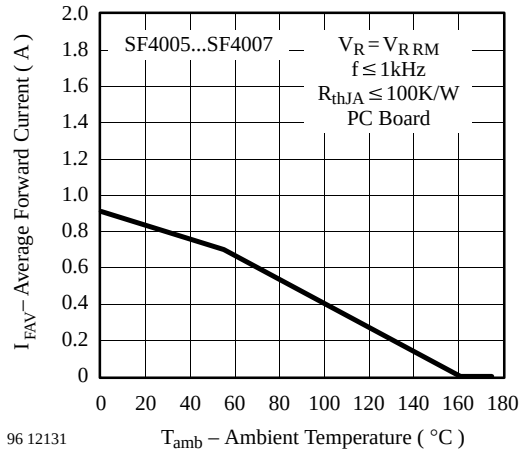


Figure 3. Max. Average Forward Current vs. Ambient Temperature

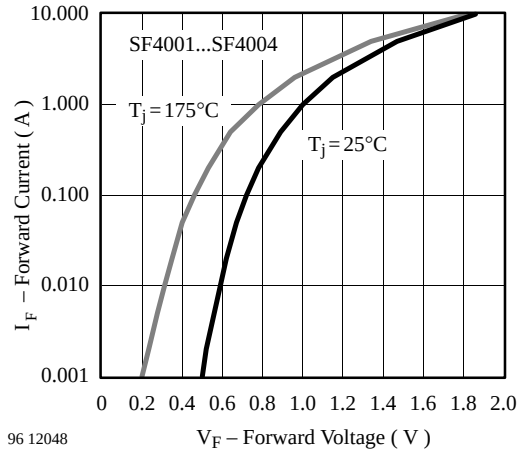


Figure 6. Max. Forward Current vs. Forward Voltage

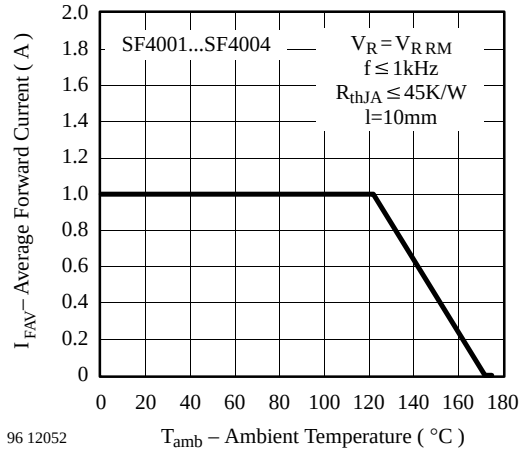


Figure 4. Max. Average Forward Current vs. Ambient Temperature

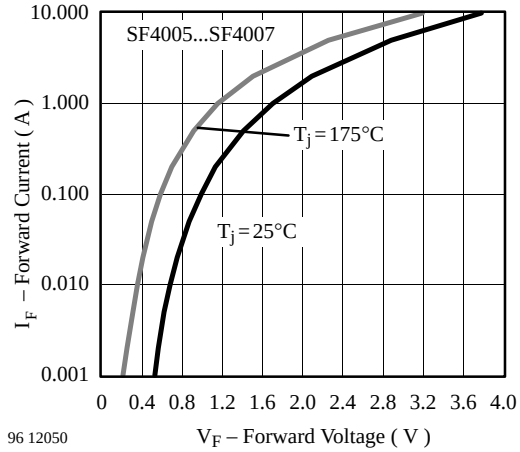


Figure 7. Max. Forward Current vs. Forward Voltage

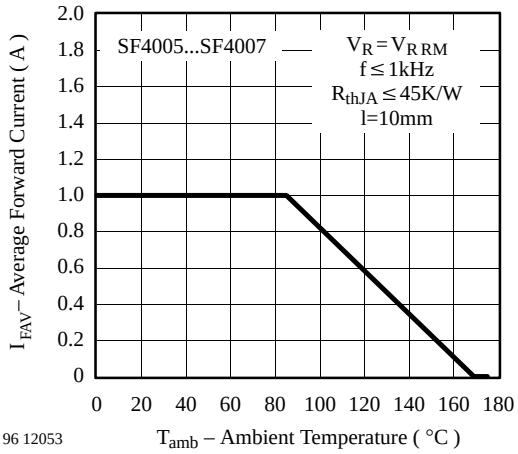


Figure 5. Max. Average Forward Current vs. Ambient Temperature

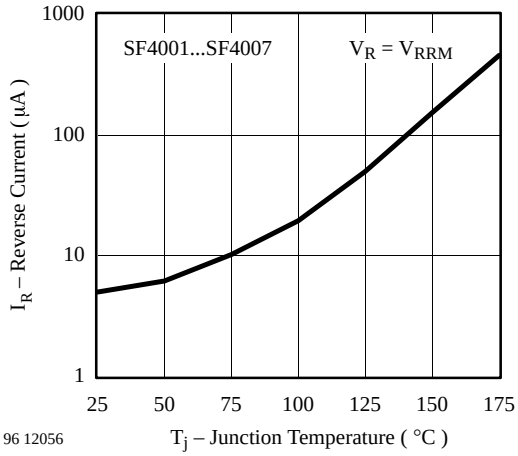


Figure 8. Max. Reverse Current vs. Junction Temperature